

ELECTRIC MOTOR WITH ENCODER

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ABSTRACT OF THE DISCLOSURE

An assembly of electric motor with encoder, including an electric motor having a motor housing, and an encoder for detecting the rotation angle of the output shaft of the electric motor. The encoder includes a frame member attached to the motor housing in a conductive manner, a circuit board supported on the frame member and a detection circuit provided in the circuit board. The assembly of electric motor with encoder further includes an output signal cable connected to the circuit board of the encoder and including a signal wire and a shield member, and a grounding mechanism electrically connecting the shield member of the output signal cable to the motor housing for grounding purposes. The grounding mechanism includes a conductor patterned on the circuit board, a first connecting structure mutually connecting the conductor to the shield member, and a second connecting structure mutually connecting the conductor to the frame member. The second connecting structure includes a through-hole plating provided in the circuit board to be connected to the conductor, and a fastening element inserted into a through hole having the through-hole plating and securing the circuit board onto the frame member. When the fastening member is fastened, the through-hole plating comes into conductive contact with the frame member.